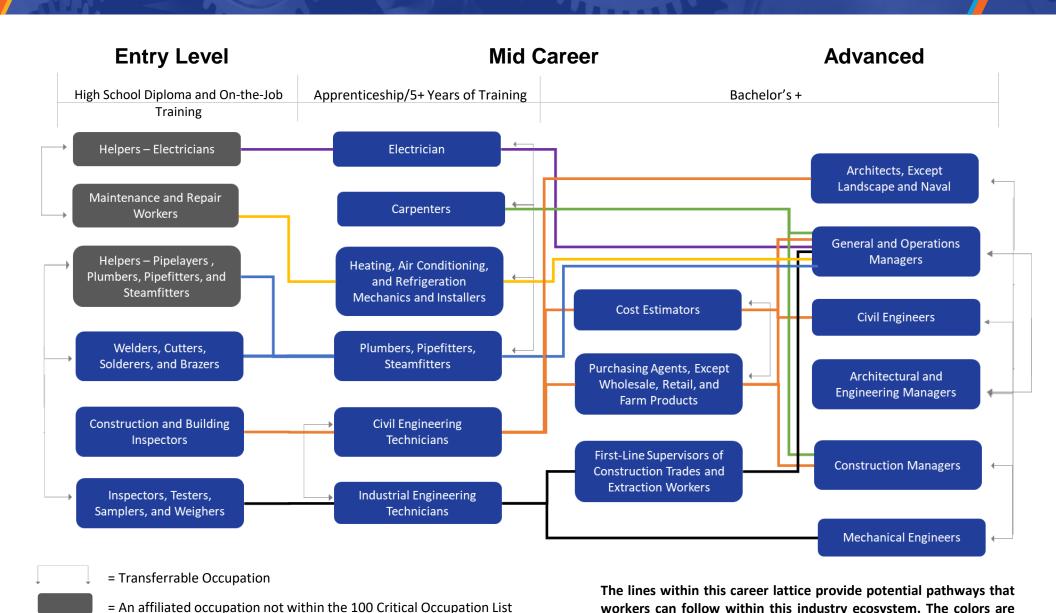
### **Construction Ecosystem Career Lattice**



= An Occupation within the 100 Critical Occupation List

workers can follow within this industry ecosystem. The colors are

simply to differentiate one pathway option from the other.

# Welders, Cutters, Solderers, and Brazers Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$19.07/hour



#### **COMMON JOB TITLES**

CNC Welder (Production)

Structural Fitter

Fabricator

Welding Supervisor

#### REQUESTED EDUCATION

High School or Less Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Operation and Control

Critical Thinking

Reading Comprehension

Monitoring

**Quality Control Analysis** 

Active Listening

Speaking

**Operation Monitoring** 

Judgment and Decision Making

Monitoring

#### **TOTAL JOBS FOR 2028**

9,583



# COMMON KNOWLEDGE COMPETENCIES

**Production and Processing** 

Mechanical

Design

Administration and Management

### TOP CERTIFICATIONS REQUESTED

Certified Welder

General Certificate Of Secondary Education



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

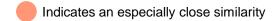


Education



Creative Industries

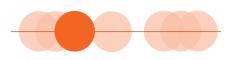




# Construction and Building Inspectors Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$21.81/hour



#### **COMMON JOB TITLES**

Construction Inspector

Property Adjuster

**Building Inspector** 

**Property Underwriter** 

#### REQUESTED EDUCATION

High School or Less Post-Secondary Certificate Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Critical Thinking

Active Listening

Speaking

Complex Problem Solving

Writing

**Quality Control Analysis** 

Judgment and Decision Making

Active Learning

Monitoring

#### **TOTAL JOBS FOR 2028**

1,904



# COMMON KNOWLEDGE COMPETENCIES

**Building and Construction** 

English Language

Customer and Personal Service

**Engineering and Technology** 

### TOP CERTIFICATIONS REQUESTED

Certified Welding Inspector

Commercial Driver's License (CDL)

Construction Documents Technologist



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

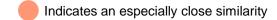


Education



Creative Industries

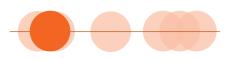




# Inspectors, Testers, Sorters, Samplers, and Weighers **Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$18.07/hour



#### **COMMON JOB TITLES**

Software Tester

**Product Analyst** 

Quality Inspector

**Quality Control Inspector** 

#### REQUESTED EDUCATION

Post-Secondary Certificate

Bachelor's+

#### **TOP SKILLS REQUESTED**

**Quality Control Analysis** 

Active Listening

Reading Comprehension

Speaking

Critical Thinking

Monitoring

Coordination

**Operation Monitoring** 

Judgment and Decision Making

Writing

#### **TOTAL JOBS FOR 2028**

5.261



### COMMON KNOWLEDGE COMPETENCIES

Production and Processing

Mathematics

**English Language** 

Computers and Electronics

#### TOP CERTIFICATIONS REQUESTED

Certified Welding Inspector

**ASNT Non-Destructive Tester** 

Commercial Driver's License (CDL)

Certified Quality Technician



Aerospace & Defense



Agriculture & **Biosciences** 



Energy



Information & Financial **Systems** 



**Transportation** & Distribution



Construction



**Health Care** 

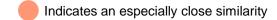


Education



Creative Industries





### **Electricians Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$23.47/hour



#### **COMMON JOB TITLES**

Journeyman Electrician

Electrician

Electrician Apprentice

Maintenance Electrician

#### REQUESTED EDUCATION

High School o Less Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Troubleshooting

Repairing

Active Listening

Critical Thinking

Judgment and Decision Making

Installation

Speaking

Active Learning

Monitoring

Instructing

#### **TOTAL JOBS FOR 2028**

7,631



# COMMON KNOWLEDGE COMPETENCIES

**Building and Construction** 

Mechanical

Mathematics

English Language

### TOP CERTIFICATIONS REQUESTED

Commercial Driver's License (CDL)

Certified First Responder

Certified Broadcast Radio Engineer



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

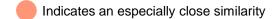


Education



Creative Industries

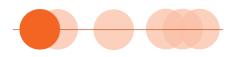




### **Carpenters Occupational Profile**

### **MEDIAN SALARY & WAGES**

\$17.42/hour



#### **COMMON JOB TITLES**

Carpenter

Sales Supervisor

Construction Laborer

#### **REQUESTED EDUCATION**

**TOP CERTIFICATIONS** 

**REQUESTED** 

High School or Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Active Listening

Speaking

Reading Comprehension

Monitoring

Critical Thinking

Monitoring

Coordination

Judgment and Decision Making

Active Learning

Complex Problem Solving

#### **TOTAL JOBS FOR 2028**

5,533



# COMMON KNOWLEDGE COMPETENCIES

**Building and Construction** 

Mathematics

English Language

Design



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

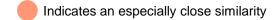


Education



Creative Industries

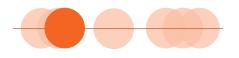




# Heating, Air Conditioning, and Refrigeration Mechanics and Installers Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$21.11/hour



#### **COMMON JOB TITLES**

**HVAC** Refrigeration Technician

**HVAC Service Technician** 

Refrigeration Repair Technician

Heating, Ventilation, and Air Conditioning (HVAC) Mechanic

#### REQUESTED EDUCATION

High School o Less Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Operation Monitoring

Repairing

**Equipment Maintenance** 

Troubleshooting

Installation

**Equipment Selection** 

**Quality Control Analysis** 

**Operation Monitoring** 

Operation and Control

Reading Comprehension

#### **TOTAL JOBS FOR 2028**

3.964



### COMMON KNOWLEDGE COMPETENCIES

Mechanical

Customer and Personal Service

**Building and Construction** 

English Language

### TOP CERTIFICATIONS REQUESTED

Commercial Driver's License (CDL)

Professional Engineer



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

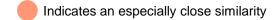


Education



Creative Industries

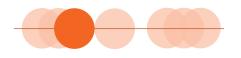




# Plumbers, Pipefitters, and Steamfitters Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$22.23/hour



#### **COMMON JOB TITLES**

Plumber

Pipe Fitter

Maintenance Mechanic

Maintenance Mechanic

#### REQUESTED EDUCATION

High School or Less Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Critical Thinking

Judgment and Decision Making

Active Listening

Reading Comprehension

Active Listening

Critical Thinking

Speaking

Time Management

**Operation Monitoring** 

Complex Problem Solving

#### **TOTAL JOBS FOR 2028**

7,299



### COMMON KNOWLEDGE COMPETENCIES

**Building and Construction** 

Mechanical

Design

Mathematics

### TOP CERTIFICATIONS REQUESTED

Commercial Driver's License (CDL)

**Certified Safety Professional** 



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

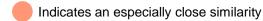


Education



Creative Industries

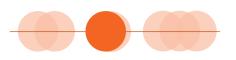




### **Civil Engineering Technicians Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$25.08/hour



#### **COMMON JOB TITLES**

Engineering Technician

**CAD Technician** 

Civil Engineer

Construction Technician

#### REQUESTED EDUCATION

High School o Less

Post-Secondary Certificate Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Critical Thinking

Active Listening

Mathematics

Speaking

Writing

Monitoring

Complex Problem Solving

Judgment and Decision Making

Coordination

#### **TOTAL JOBS FOR 2028**

762



# COMMON KNOWLEDGE COMPETENCIES

Engineering and Technology

**Building and Construction** 

Mathematics

Design

### TOP CERTIFICATIONS REQUESTED

**Professional Engineer** 

Licensed Professional Engineer

**ASNT Non-Destructive Tester** 



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

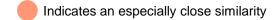


Education



Creative Industries

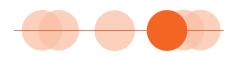




### **Industrial Engineering Technicians Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$29.04/hour



#### **COMMON JOB TITLES**

Quality Assurance Engineer

**Quality Technician** 

Engineering Technician

Process Technician

#### REQUESTED EDUCATION

High School o Less

Post-Secondary Certificate Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Active Listening

Monitoring

Critical Thinking

Complex Problem Solving

Speaking

Systems Analysis

Systems Evaluation

Time Management

Writing

#### **TOTAL JOBS FOR 2028**

724



# COMMON KNOWLEDGE COMPETENCIES

**Engineering and Technology** 

Production and Processing

Mathematics

Mechanical

### TOP CERTIFICATIONS REQUESTED

**ASNT Non-Destructive Tester** 

Certified Welding Inspector

Transportation Worker Identification Credential (TWIC) Card



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

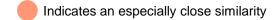


Education



Creative Industries

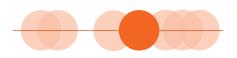




# **Cost Estimators Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$27.84/hour



### **COMMON JOB TITLES**

Business/Financial Estimator

**Construction Estimator** 

**Project Manager** 

**Electrical Estimator** 

#### REQUESTED EDUCATION

High School or

Post-Secondary Certificate

Bachelor's+

#### **TOP SKILLS REQUESTED**

Mathematics

Reading Comprehension Listening

Critical Thinking

Critical Active Listening

Speaking

Judgment and Decision Making

Writing

**Active Learning** 

Complex Problem Solving

Systems Analysis

#### **TOTAL JOBS FOR 2028**

2,060



# COMMON KNOWLEDGE COMPETENCIES

Mathematics

Engineering and Technology

English Language

**Building and Construction** 

### TOP CERTIFICATIONS REQUESTED

**Professional Engineer** 



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care



Education



Creative Industries





# Purchasing Agents, Except Wholesale, Retail, and Farm Products Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$27.07/hour



#### **COMMON JOB TITLES**

Purchasing Analyst

Senior Buyer

Purchasing Agent

**Procurement Analyst** 

#### REQUESTED EDUCATION

Sec Cer

Post-Secondary Certificate

Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Active Listening

Speaking

Critical Thinking

Writing

Active Learning

**Judgment and Decision Making** 

Management of Financial Resources

Monitoring

Persuasion

#### **TOTAL JOBS FOR 2028**

3.849



### COMMON KNOWLEDGE COMPETENCIES

English Language

Administration and Management

**Economics and Accounting** 

Law and Government

### TOP CERTIFICATIONS REQUESTED

Commercial Driver's License (CDL)

Production/Inventory Management

Certified Purchasing Manager

Transportation Worker Identification Credential (TWIC) Card



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

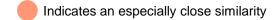


Education



Creative Industries





# First-Line Supervisors of Construction Trades and Extraction Workers Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$28.94/hour



#### **COMMON JOB TITLES**

Construction Superintendent

Construction Supervisor

Foreman (Construction and Extraction)

Construction Administrator

#### REQUESTED EDUCATION

High School or Less Post-Secondary Certificate

#### **TOP SKILLS REQUESTED**

Active Listening

Speaking

Coordination

Monitoring

Time Management

Management of Personnel Resources

Critical Thinking

Reading Comprehension

Instructing

Management of Personnel Resources

#### **TOTAL JOBS FOR 2028**

10,572



# COMMON KNOWLEDGE COMPETENCIES

Administration and Management

Clerical

**Economics and Accounting** 

Sales and Marketing

### TOP CERTIFICATIONS REQUESTED

Commercial Driver's License (CDL)

**Certified Master Trainer** 

Associate Safety Professional

Registered Communications
Distribution Designer



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

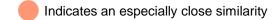


Education



Creative Industries

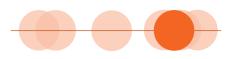




### **General and Operations Managers Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$37.47/hour



#### **COMMON JOB TITLES**

General Manager

**Operations Manager** 

Store Manager (Management)

Sales Manager (Sales and Related)

#### REQUESTED EDUCATION

High School or Less Ce

Post-Secondary Certificate

Bachelor's+

#### **TOP SKILLS REQUESTED**

**Active Listening** 

Speaking

Monitoring

Social Perceptiveness

Coordination

Reading Comprehension

Critical Thinking

Time Management

Negotiation

**Active Learning** 

#### **TOTAL JOBS FOR 2028**

29,825



# COMMON KNOWLEDGE COMPETENCIES

Administration and Management

Customer and Personal Service

Personnel and Human Resources

English Language

### TOP CERTIFICATIONS REQUESTED

Master Of Business Administration

Series 63

Series 6

Certified Retirement Administrator



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

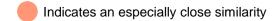


Education



Creative Industries

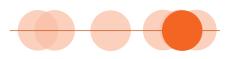




# **Civil Engineers Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$38.15/hour



#### **COMMON JOB TITLES**

Civil Engineer
Project Engineer
Structural Engineer
Geotechnical Engineer

#### REQUESTED EDUCATION

Post-Secondary

Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Critical Thinking

Active Listening

Speaking

Complex Problem Solving

Mathematics

**Operations Analysis** 

Systems Analysis

Time Management

Science

#### **TOTAL JOBS FOR 2028**

2,512



# COMMON KNOWLEDGE COMPETENCIES

Engineering and Technology

**Building and Construction** 

Mathematics

Design

### TOP CERTIFICATIONS REQUESTED

Professional Engineer

Licensed Professional Engineer

Registered Communications Distribution Designer



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

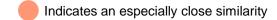


Education



Creative Industries





# Architectural and Engineering Managers Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$56.68/hour



#### **COMMON JOB TITLES**

Engineering Manager

Project Manager (Management)

Director of Engineering

Program Manager

#### **REQUESTED EDUCATION**

Post-

Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Critical Thinking

Active Listening

Speaking

Complex Problem Solving

Coordination

Judgment and Decision Making

Writing

Time Management

Mathematics

#### **TOTAL JOBS FOR 2028**

2,114



# COMMON KNOWLEDGE COMPETENCIES

Engineering and Technology

Administration and Management

Mathematics

Design

# TOP CERTIFICATIONS REQUESTED

**Professional Engineer** 

Licensed Professional Engineer

Master Of Business Administration

Project Management Professional Certification



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

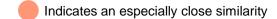


Education



Creative Industries

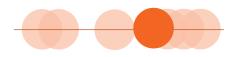




# **Construction Managers Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$35.55/hour



#### **COMMON JOB TITLES**

Project Manager (Management)

Construction Superintendent

Construction Manager

Assistant Construction Project Manager

#### REQUESTED EDUCATION

Post-

Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Critical Thinking

Active Listening

Speaking

Coordination

Complex Problem Solving

Management of Personnel Resources

**Active Learning** 

Time Management

Monitoring

#### **TOTAL JOBS FOR 2028**

3.222



### COMMON KNOWLEDGE COMPETENCIES

English Language

**Building and Construction** 

Administration and Management

Engineering and Technology

# TOP CERTIFICATIONS REQUESTED

Professional Engineer

Certified Construction Manager

PMI Certified

Project Management Professional Certification



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

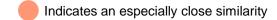


Education



Creative Industries





# **Mechanical Engineers Occupational Profile**

#### **MEDIAN SALARY & WAGES**

\$37.39/hour



#### **COMMON JOB TITLES**

Mechanical Engineer
Design Engineer
Service Engineer

#### REQUESTED EDUCATION



Bachelor's+

#### **TOP SKILLS REQUESTED**

Reading Comprehension

Active Listening

Mathematics

Science

Critical Thinking

Complex Problem Solving

**Operations Analysis** 

Judgment and Decision Making

Systems Evaluation

**Active Learning** 

#### **TOTAL JOBS FOR 2028**

2,704



# COMMON KNOWLEDGE COMPETENCIES

Engineering and Technology

Design

Mathematics

Mechanical

# TOP CERTIFICATIONS REQUESTED

**Professional Engineer** 

Licensed Professional Engineer

Certified Sales Executive



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care

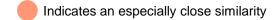


Education



Creative Industries





# Architects, Except Landscape and Naval Occupational Profile

#### **MEDIAN SALARY & WAGES**

\$36.77/hour



#### **COMMON JOB TITLES**

Architect

Architectural Project Manager

**Design Architect** 

Senior Planner

#### REQUESTED EDUCATION

Bachelor's+

#### **TOP SKILLS REQUESTED**

Speaking

Critical Thinking

Reading Comprehension

Active Listening

Complex Problem Solving

**Operations Analysis** 

Judgment and Decision Making

Monitoring

Coordination

Writing

#### **TOTAL JOBS FOR 2028**

902



# COMMON KNOWLEDGE COMPETENCIES

Design

**Building and Construction** 

Customer and Personal Service

English Language

### TOP CERTIFICATIONS REQUESTED

**NCARB** Certification



Aerospace & Defense



Agriculture & Biosciences



Energy



Information & Financial Systems



Transportation & Distribution



Construction



Health Care



Education



Creative Industries





### Oklahoma's Ecosystems

#### WHAT IS AN ECONOMIC ECOSYSTEM?

Oklahoma has identified nine driver and complementary economic systems representing the most prominent industries in terms of wealth generation and growth potential. Driver ecosystems drive wealth generation in Oklahoma, while the complementary ecosystems help to expand wealth in the economy and provide the infrastructure and services to support the driver systems in the state.

- Driver ecosystems: Aerospace and Defense, Agriculture and Biosciences, Energy, Information and Financial Systems, and Transportation and Distribution.
- Complementary Ecosystems: Construction, Health care, Education, and Creative industries.

#### WHAT ARE THE 100 CRITICAL OCCUPATIONS?

These occupations represent the most pressing needs in each of Oklahoma's Driver and Complementary Economic Systems necessary for the state's continued growth and economic prosperity. A workforce pipeline for each of the top 100 critical occupations is required for Oklahoma's businesses to grow and for Oklahoma citizens to earn a prosperous living. Factors included in the selection process demonstrate the values of job growth, wealth generation, and education, as outlined below:

- Job growth: all occupations have positive forecasted employment growth over the next ten years
- Wealth Generation: all occupations offer median wages greater than or equal to \$12.00 per hour
- Education: occupations requiring "no formal education" are eliminated, except those that offer greater than or equal to \$20.00 per hour.

#### WHAT ARE TRANSFERABLE OCCUPATIONS?

There are occupations that can provide valuable on-the-job training for individuals interested in the 100 Critical Occupations. These are generally entry-level or mid-career level occupations that can help individuals develop the knowledge, skills, and abilities needed to move forward on their career paths.

#### WHAT ARE CAREER PATHWAYS?

Career pathways are designed to help people who are looking to make the next step in their careers both envision and plan for their long-term employment goals. The recommended pathways in this report are based on forecasted employment prospects as well as knowledge, skills and ability profile data by specific occupation. These data were gathered from numerous employer-demand driven data sources. Based on these data, Oklahoma Works determined similarities and difference between each occupation's required skill sets and developed possible career pathways options.



### **Glossary**

**ABILITIES** – the proficiency, skills, or talent within a particular area.

CAREER PATHWAY – a career pathway means a combination of relevant, rigorous and high-quality education, training, and supportive services that aligns both vertically and horizontally across Secondary Education, Adult Basic Education, Workforce Training and Development, Career and Technical Education, and Postsecondary Education systems, pathways, and programs.

**CERTIFICATION** – third party accrediting or authorizing agency or person who assess, verifies, and provides an official documentation that attests a level of achievement.

**COMPETENCIES** – an individual's ability to do a job properly through a set of behaviors.

**INDUSTRY-ALIGNED CREDENTIAL** – credentials whose standards are aligned to industry-recognized standards.

**INDUSTRY-ENDORSED CREDENTIAL** – credentials whose standards are aligned to and endorsed by industry.

**INDUSTRY-RECOGNIZED CREDENTIAL** – an industry-recognized credential is one that either is developed and offered by, or endorsed by a nationally-recognized industry association or organization representing a sizeable portion of the industry sector, or a credential that is sought or accepted by companies within the industry sector for purposes of hiring or recruitment which may include credentials from vendors of certain products.<sup>1</sup>

**KNOWELDGE** – the skills and information acquired through education or experience.

**MEDIAN HOURLY EARNINGS** – hourly earnings for the occupation reported at the 50th percentile.

**REQUESTED EDUCATION** – the highest level of education for workers within the given occupational category. Please note these are not the level of education of new incoming workers but of workers currently employed within these positions.

**SKILLS** – the ability or expertise to do something well.

**TOTAL JOBS** – estimated number of jobs in the given year, taken as average over a period of 12-months. This value includes both full- and part-time jobs.



<sup>1</sup> For this analysis, TPMA utilized certifications data from a third-party data aggregator, Economic Modeling Specialists, Inc., which daily accesses over 300 million unique job postings records. Though these certifications have not been vetted by Oklahoma Works, they are observed as commonly requested by industry employers.